

Michigan 3D Elevation Program (3DEP) State Workshop



Michigan Geological Survey
Comments &
recommendations for a
Statewide LiDAR Program,
now

Michigan Geological Survey
John A. Yellich
Director
John.a.yellich@wmich.edu

June 2, 2015



Michigan – Paucity of LiDAR data

- One of two Great Lakes states that has NOT conducted a Statewide LIDAR program
- Most Great Lakes states are in their second and third LiDAR phase
- Limited LiDAR by Counties, USGS shared funding, this is a great start
- The entire State needs LiDAR
- Geological Survey applauds USGS for their efforts
- Need levels QL- 2. Limited benefit to QL-3, unless there is little vegetation
- Must focus on flying when there is limited vegetation

Yellich, MGS

+ Michigan – Paucity of useable LiDAR to support science

3

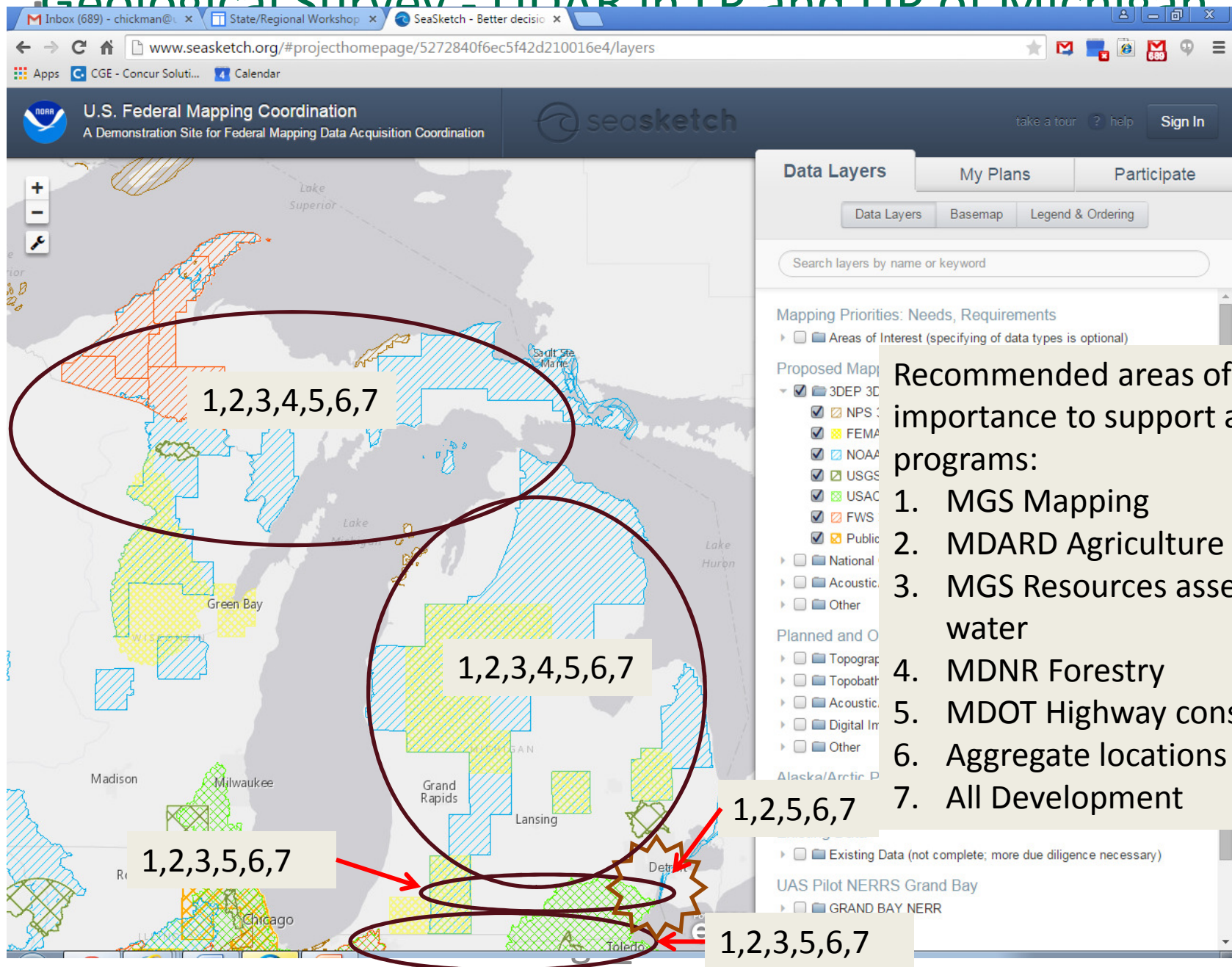
All State and local government agencies can use LiDAR data

- MDARD - Soil conservation- Agriculture,
 - Including Federal NRCS
- MDOT - Highway Construction,
- MDNR - Forestry and Property Management,
- MDEQ – Resource permitting, assessments, dams, etc.
- Geological Survey (MGS) - Mapping of surficial geology, natural resources,
- Management of any development (City, Twps, County, State)

Yellich, MGS

Geological Survey - LiDAR in LP and LP of Michigan

4



MGS Comments &
recommendations
for a Statewide
LiDAR Program now

THANK YOU



Michigan Geological Survey
John A. Yellich
Director
John.a.yellich@wmich.edu

June 2, 2015

Quality Levels (QL)	Source	Point Density (pts/m²)	Nominal Pulse Spacing (NPS) (m)	DEM Post Spacing (arc-sec, m)	Vertical RMSEz (cm)	Equivalent Contour Accuracy (ft)
QL1	lidar	8	0.35	1/27, ~1	9.25	1
QL2	lidar	2	0.7	1/27, ~2	9.25	1
QL3	lidar	1 – 0.25	1 – 2	1/9, ~3	≤ 18.5	2
QL4	images	0.04	5	1/3, ~10	46.3 – 139	5 – 15
QL5	IfSar	0.04	5	1/3, ~10	92.7 – 185	10 – 20



gs_baa@usgs.gov